Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: Duane Ullman

2. *Type of action*: Application to Change a Water Right—Additional Stock Tanks 42M 30159571

3.

4. *Water source name*: Groundwater

5. *Location affected by project*: Section 27, T25N, R58E, Richland County.

6. *Narrative summary of the proposed project, purpose, action to be taken, and benefits*:

The proposed change is to add two stock tanks to Groundwater Certificate 42M 102792-00. The point of diversion is a well located in NWSWSW Sec 27, T25N, R58E, Richland County. The two additional stock tanks are located in SWNWSE Sec 27, T25N, R58E, Richland County. If approved, a total of one well and three stock tanks will be included in the system. Maximum diversion of the historic use is 5 GPM and 1.70 AF, which will remain the same under the change authorization. The applicant historically runs 100 cow-calf pairs; the proposed action would ensure reliable livestock water supply as well as improve grazing management.

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402, MCA are met.

7. Agencies consulted during preparation of the Environmental Assessment:

Montana Department of Natural Resources and Conservation (DNRC)
Montana Natural Heritage Program website
USDA Web Soil Survey
National Wetlands Inventory website

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The proposed project is within DNRC Basin 42M, Yellowstone River below Powder River. Water is diverted through a well 200 ft deep, with the static water level at 100 ft. The flow rate and volume of the appropriation is 5 GPM and 1.70 AF. The applicant has been watering 100 cow-calf pairs from the well and one stock tank since 1997. Adding two tanks will not expand the animal units, flow rate and the volume.

In this semi-arid region of eastern Montana, surface channels are predominantly ephemeral streams—streams which flow in response to snowmelt and precipitation events. Therefore, the well is not expected to disrupt adjacent surface water flows.

Determination: No significant impacts.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The proposed project is a groundwater appropriation. The project involves an existing well which delivers water to stock tanks via pipelines. The Yellowstone River is 10 miles to the east. The project is not expected to impact surface water quality.

Determination: No significant impacts.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

According to the Richland County Water Resources Survey, the aquifer underlying the project site is the Fort Union aquifer of the Tertiary period. Groundwater quality of the Fort Union aquifer is characterized by elevated alkalinity and salinity within suitable level for livestock consumption. On the surface, the place of use (stock tanks) drains to an unnamed upper tributary of Second Hay Creek, which makes its way into the Yellowstone River about 10 miles east.

The applicant has been watering 100 cow-calf pairs from an existing well and one stock tank since 1997. Since the applicant will not increase volume and flow rate, nor change purpose of use, the addition of two stock tanks is not expected to impact groundwater quality or supply.

The beneficial use of the water right is livestock. With the addition of two stock tanks, the applicant will be able to rotate the animals and manage grazing distribution more effectively, which in turn would benefit vegetation, soil health, wildlife, and water quality.

Determination: No significant impacts.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The point of diversion is a well located in NWSWSW Sec 27, T25N, R58E, Richland County. The well was completed to a depth of 200 feet, with a static water level of 100 ft. Diversion is operated with a 3/4 HP submersible pump which pumps water 10 feet south to the well pit where a pressure tank with a switch to control water pressure is located. Two pipelines, each with a shut-off valve, deliver water to two places of use.

The existing line is a 1.25-inch HDPE pipe buried 7 feet deep and runs 15 feet west to the existing tank. The added line is also a 1.25-inch pipeline buried 7 feet deep. It runs 2,400 feet northeast to a stop-and-waste valve; about 20 feet further east is the first additional tank. The second tank, branched off of the 20-ft HPDE line, is 5 feet north of the first tank. Each tank has a ball valve as well as a shut-off float switch.

Determination: No significant impacts.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The major land use in the project area has been livestock. According to the Montana Natural Heritage Program website, 38 animal species listed with "sensitive status" by the Bureau of Land Management (BLM) occur in Richland County. Northern Myotis, Piping Plover and Yellow-billed Cuckoo are listed as "threatened" species by BLM and occur in Richland County. Both BLM and the U.S. Fish & Wildlife Service list the Whooping Crane and the Pallid Sturgeon as Endangered; BLM also lists the Least Tern as Endangered. There are no federally-listed plants species within the project area.

Whooping Crane

The federally endangered Whooping Crane migrate between Canada and Texas. They occasionally cross the eastern portion of Montana, although their main migratory corridor is found to the east in the Dakotas. While the species was close to extinction during the early and mid-1900s, intensive management has helped to begin the recovery process. The species is still very rare across its range and at risk of extinction. Whooping Crane has a verified occurrence in Richland County.

Least Tern

The Least Tern prefers unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana; specifically, the Yellowstone River and the Missouri River systems.

Pallid Sturgeon
The Pallid Sturgeon is currently listed as "At High Risk" in Montana due to extremely limited and/or rapidly declining population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state. The pallid sturgeon is one of the rarest fishes in North America and was federally listed as endangered in 1990. The Pallid Sturgeon has been declining during at least the past 50 years with only about 200 adults remaining in the upper Missouri River and limited natural reproduction.

Determination: The groundwater development is not expected to have significant impacts.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

According to the National Wetlands Inventory website, there are no wetlands in or near the proposed place of use and point of diversion.

Determination: No significant impacts.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not applicable.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE *- Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to the USDA Web Soil Survey, the soils within the place of use are predominantly Vida-Zahill loams on 2 to 8 percent slopes, and Williams loam on 0 to 4 percent slopes. The Vida-Zahill unit consists of deep, well drained clay loam on low hills or side slopes of moraines. It is classified as nonsaline to slightly saline (0.0 to 2.0 mmhos/cm), with medium susceptibility to compaction and moderate erosion hazard. The Williams loam is classified with medium compaction risk and slight erosion hazard. The addition of two stock tanks would enable the applicant to rotate the livestock more effectively, thus improving range condition and soil health. No permanent degradation to soil quality, stability or moisture content is anticipated.

Determination: No significant impacts.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS *- Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

According to soil survey, the Vida-Zahill loam can expect a range production of 1,286 pounds per acre per year in a normal year. The Williams loam can expect a range production of 1,450 pounds per acre per year in a normal year. This forage productivity is adequate to support the applicant's stocking rate. While traffic around the stock tanks invites weed invasion, it is not expected to exceed what normally occurs in cattle-concentrated area.

Determination: No significant impacts.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

A normal amount of dust is expected with cattle movement. However, it should not present a risk to vegetation or animals. Additional stock tanks will also help spread out cattle, improve vegetation cover and reduce soil erosion, all of which benefit air quality.

Determination: No significant impacts.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

***Determination*:** NA-Project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: The project is located in rural, private land that has historically been used for livestock. It will not have an impact on recreation or wilderness activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: This project will have no impact on human health.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X** If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: There are no additional governmental regulatory impacts on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact

(*b)* *Local and state tax base and tax revenues?* No significant impact

(c) *Existing land uses?* No significant impact

(*d)* *Quantity and distribution of employment?* No significant impact

(e) *Distribution and density of population and housing?* No significant impact

(f) *Demands for government services?* No significant impact

(g) *Industrial and commercial activity?* No significant impact

(h) *Utilities?* No significant impact

(i) *Transportation?* No significant impact

(j) *Safety?* No significant impact

(k) *Other appropriate social and economic circumstances?* No significant impact

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. ***Describe any mitigation/stipulation measures:*** N/A

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identifies a no-action alternative to the addition of two stock tanks. This alternative would not have any direct impacts that are typically associated with livestock drinking. The no-action alternative would not allow the Applicants to meet the purpose of grazing management.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the Applicants prove the criteria in §85-2-311, MCA are met.

2 Comments and Responses

4. ***Finding:***
*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified; therefore, an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Lih-An Yang
Title: Water Resource Specialist
Date: February 22, 2023